Prior to examination cancel claims 1-18. Substitute therefore the following claims 19-43.

Listing of Claims:

1.-18. Canceled

19. (new) An adjuvant composition comprising one or more antimicrobial agents.

20. (new) An adjuvant composition of claim 19 for use in a human vaccine.

21. (new) An adjuvant composition of claim 19 for use in a non-human animal vaccine.

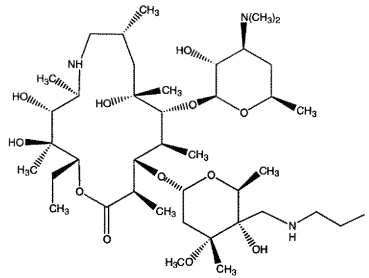
22. (new) A human or non-human animal vaccine comprising at least two components, with the two components administered either concurrently, or co-administered within a month, where the first component is an adjuvant comprising one or more antimicrobial agents and the second component is one or more antigenic agents.

23. (new) A vaccine of claim 22 where the antimicrobial agent is a macrolide or beta-lactam antibiotic.

24. (new) A vaccine of claim 22 where the vaccine is for non-human animals, where the antimicrobial agent is selected from the group consisting of tulathromycin and ceftiofur, and where the antigenic agent is one or more antigens selected from one or more from the group consisting of *M. haemolytica* antigen, *M. haemolytica* leukotoxin, *M. haemolytica* capsular antigen, *M. haemolytica* soluble antigen.

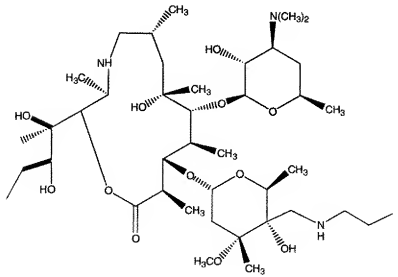
25. (new) An adjuvant composition of claim 19 where said antimicrobial agent is comprises one or more azalides selected from the group consisting of 8a-azalide and a 9a-azalide.

26. (new) An adjuvant composition of claim 19, wherein said azalide is a 9a-azalide of the formula I:



I

27. (new) An adjuvant composition of claim 22, further comprising a compound of formula II:



II

28. (new) An adjuvant composition of claim 27, comprising (a) a mixture of compounds of formulae I and II in a ratio of about 90% ± 10% to about 10% ± 10%, respectively; (b) water; and (c) one or more acids present at a total concentration of from about 0.2 mmol to about 1.0 mmol per mL of the composition.

29. (new) A vaccine comprising any of the antimicrobial adjuvant compositions of claim 25 administered either concurrently or co-administered with an antigen.

30.(new) A vaccine comprising the antimicrobial adjuvant compositions of claim 26 administered either concurrently or co-administered with an antigen.

31. (new) A vaccine comprising the antimicrobial adjuvant compositions of claim 27 administered either concurrently or co-administered with an antigen.

32. (new) A vaccine comprising any of the antimicrobial adjuvant compositions of claim 28 administered either concurrently or co-administered with an antigen.

33. (new) A vaccine of claim 29 administered either concurrently or co-administered with an antigen selected from any *M. haemolytica* antigen with an adjuvant composition of claim 28, wherein said 9a-azalide is a composition comprising (a)(i) a mixture of compounds of formulae I and II in a ratio of about 90% ± 10% to about 10% ± 10%, respectively; (ii) water; and (iii) one or more acids present at a total concentration of from about 0.2 mmol to about 1.0 mmol per mL of the composition; and (b) one or more water-miscible co-solvents present in an amount of from about 250 to about 750 mg per mL of the composition.

34. (new) A vaccine of claim 30 administered either concurrently or co-administered with an antigen selected from any *M. haemolytica* antigen with an adjuvant composition of claim 28, wherein said 9a-azalide is a composition comprising (a)(i) a mixture of compounds of formulae I and II in a ratio of about 90% ± 10% to about 10% ± 10%, respectively; (ii) water; and (iii) one or more acids present at a total concentration of from about 0.2 mmol to about 1.0 mmol per mL

of the composition; and (b) one or more water-miscible co-solvents present in an amount of from about 250 to about 750 mg per mL of the composition.

35. (new) A vaccine of claim 31 administered either concurrently or co-administered with an antigen selected from any *M. haemolytica* antigen with an adjuvant composition of claim 28, wherein said 9a-azalide is a composition comprising (a)(i) a mixture of compounds of formulae I and II in a ratio of about 90% ± 10% to about 10% ± 10%, respectively; (ii) water; and (iii) one or more acids present at a total concentration of from about 0.2 mmol to about 1.0 mmol per mL of the composition; and (b) one or more water-miscible co-solvents present in an amount of from about 250 to about 750 mg per mL of the composition.

18.(new) A vaccine of claim 32 administered either concurrently or co-administered with an antigen selected from any *M. haemolytica* antigen with an adjuvant composition of claim 28, wherein said 9a-azalide is a composition comprising (a)(i) a mixture of compounds of formulae I and II in a ratio of about 90% ± 10% to about 10% ± 10%, respectively; (ii) water; and (iii) one or more acids present at a total concentration of from about 0.2 mmol to about 1.0 mmol per mL of the composition; and (b) one or more water-miscible co-solvents present in an amount of from about 250 to about 750 mg per mL of the composition.

37. (new) A vaccine administered either concurrently or co-administered with any of the an antigen selected from any *M. haemolytica* antigen with an adjuvant composition comprising any ceftiofur.

38. (new) A method for enhancing, increasing, upwardly modulating, diversifying or otherwise facilitating an immune response in an animal to an antigen comprising administration of an antimicrobial agent to an animal.

39. (new) A method of claim 38 where the antimicrobial agent is at least one adjuvant component of a concurrent administration of an antimicrobial agents and an antigen, where the antimicrobial agent is selected from the antimicrobial agents; penicillin g, procaine, benzathine,

penicillin v, cloxacillin, ampicillin sodium, ampicillin, amoxicillin, pivampicillin, carbenicillin, piperacillin, ticarcillin, ureidopenicillin, dzlocillin, temocillin, nafcillin, aminobenzylpenicillius, mecillinam, carboxypenicillin, cephradine, cephalothin, cephapirin, cefazolin, cephalexin, cefaclor, cephadrine, cefadroxil, cefoperazone, cefoxitin, ceftiofur, ceftizoxime, ceftriaxone, cefuroxime, cefquinome, cefotaxime, ceftriaxone, ceftazidime, clavulanate-amoxicillin, clavulanate-ticarcillin, sulbactam-ampicillin, piperacillin-tazobactam, amikacin[b], apramycin, gentamicin, kanamycin, neomycin, spectomycin, streptomycin, tobramycin, lincosamides, pleuromutilium, chloramphenicols, macrolides, lincosamides-lincomycine, clindamycin, pirlimycine, pleuromutilins – tiamulin, valnemulin, chloramphenicol, thiaphenicol, florfenical, macrolides – erythromycin, tylasin, spiramycin, tilmicosin, roxithromycin, azithromycin, clarithromycin, ketolide, tulathromycin, oxytetracycline, doxycycline, tetracycline, tetracycline hcl, oxytetracycline hcl, minocycline hcl, doxycycline hyclate, sulfamethazine, trisulfapyrimidine, sulfamethoxazole, sulfadimethoxine, sulfadiazine, sulfisoxazole, phthalylsulfathiazole, salicylazolsulfapyridine, silver sulfadiazine, enrofloxacin, orbifloxacin, difloxacin, danofloxacin, marbofloxacin, sarafloxacin, spectinomycin, imipenem, meropenem, cefotetan, cefprozil, loracarbef, cefdinir, cefpodoxime, ceftibuten, ceftozoxime, cefepime, dirithromycin, dicloxacillin, oxacillin, mezlocillin, nalidixic acid, ciprofloxacin, enoxacin, lomefloxacin, norfloxacin, ofloxacin, levofloxacin, sparfloxacin, alatrofloxacin, gatifloxacin, moxifloxacin, trimethoprim, aztreonam, quinupristin, fosfomycin, metronidazole, nitrofurantoin, rifampin, vancomycin, (2R,3S,4R,5R,8R,10R,11R,12S, 13S,14R)-13-((2,6-dideoxy-3-C-methyl-3-O-methyl-4-C-((propylamino)-methyl)-α-L-ribo-hexopyranosyl)oxy-2-ethyl-3,4,1 0-trihydroxy-3,5,8,10,12,14-hexamethyl-11-((3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranosyl)oxy)-1-oxa-6-azacyclopentadecan-15-one, and (3R,6R,8R,9R,10S,11S.12R)-11-((2,6-dideoxy-3-C-methyl-3-O-methyl-4-C-((pro pylamino)methyl-α-L-ribo-hexopyranosyl)oxy)-2-((1R,2R)-1,2-dihydroxy-1-methylbutyl)-8-hydroxy-3,6,8,10,12-pentamethyl-9-((3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranosyl)oxy)-1-oxa-4-azacyclotridecan-13-one and where the antigenic agents are Pasteurella multocida, Mannheimia haemolytica, Haemophilius somni, and Pasteurella haemolytica.

40. (new) A method of claim 38 where the antimicrobial agent is at least one adjuvant component of a co-administration of an antimicrobial agents and an antigen, where the antimicrobial agent is selected from; penicillin g, procaine, benzathine, penicillin v, cloxacillin, ampicillin sodium, ampicillin, amoxicillin, pivampicillin, carbenicillin, piperacillin, ticarcillin, ureidopenicillin, dzlocillin, temocillin, nafcillin, aminobenzylpenicillius, mecillinam, carboxypenicillin, cephradine, cephalothin, cephapirin, cefazolin, cephalexin, cefaclor, cephadrine, cefadroxil, cefoperazone, cefoxitin, ceftiofur, ceftizoxime, ceftriaxone, cefuroxime, cefquinome, cefotaxime, ceftriaxone, ceftazidime, clavulanate-amoxicillin, clavulanate-ticarcillin, sulbactam-ampicillin, piperacillin-tazobactam, amikacin[b], apramycin, gentamicin, kanamycin, neomycin, spectomycin, streptomycin, tobramycin, lincosamides, pleuromutilium, chloramphenicols, macrolides, lincosamides-lincomycine, clindamycin, pirlimycine, pleuromutilins – tiamulin, valnemulin, chloramphenicol, thiaphenicol, florfenical, macrolides – erythromycin, tylasin, spiramycin, tilmicosin, roxithromycin, azithromycin, clarithromycin, ketolide, tulathromycin, oxytetracycline, doxycycline, tetracycline, tetracycline hcl, oxytetracycline hcl, minocycline hcl, doxycycline hyclate, sulfamethazine, trisulfapyrimidine, sulfamethoxazole, sulfadimethoxine, sulfadiazine, sulfisoxazole, phthalylsulfathiazole, salicylazolsulfapyridine, silver sulfadiazine, enrofloxacin, orbifloxacin, difloxacin, danofloxacin, marbofloxacin, sarafloxacin, spectinomycin, imipenem, meropenem, cefotetan, cefprozil, loracarbef, cefdinir, cefpodoxime, ceftibuten, ceftozoxime, cefepime, dirithromycin, dicloxacillin, oxacillin, mezlocillin, nalidixic acid, ciprofloxacin, enoxacin, lomefloxacin, norfloxacin, ofloxacin, levofloxacin, sparfloxacin, alatrofloxacin, gatifloxacin, moxifloxacin, trimethoprim, aztreonam, quinupristin, fosfomycin, metronidazole, nitrofurantoin, rifampin, vancomycin, (2R,3S,4R,5R,8R,10R,11R,12S, 13S,14R)-13-((2,6-dideoxy-3-C-methyl-3-O-methyl-4-C-((propylamino)-methyl)-α-L-ribo-hexopyranosyl)oxy-2-ethyl-3,4,1 0-trihydroxy-3,5,8,10,12,14-hexamethyl-11-((3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranosyl)oxy)-1-oxa-6-azacyclopentadecan-15-one, and (3R,6R,8R,9R,10S,11S,12R)-11-((2,6-dideoxy-3-C-methyl-3-O-methyl-4-C-((pro pylamino)methyl-α-L-ribo-hexopyranosyl)oxy)-2-((1R,2R)-1,2-dihydroxy-1-methylbutyl)-8-hydroxy-3,6,8,10,12-pentamethyl-9-((3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranosyl)oxy)-1-oxa-4-azacyclotridecan-13-oneand where the

antigenic agents are Pasteurella multocida, Mannheimia haemolytica, Haemophilus somni, and Pasteurella haemolytica.

41. (new) A method of preventing a disease caused by a pathogenic agent, cancerous cell, or allergen in an animal comprising the step of administering the adjuvant compositions or vaccines described herein and in claim 19 to an animal susceptible to said disease.

42. (new) A method of preventing a disease caused by a pathogenic agent, cancerous cell, or allergen in an animal comprising the step of administering the adjuvant compositions or vaccines described herein and in claim 22 to an animal susceptible to said disease.

43. (new) A method of preventing a disease caused by a pathogenic agent, cancerous cell, or allergen in an animal comprising the step of administering the adjuvant compositions or vaccines described herein and in claim 24 to an animal susceptible to said disease.